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REMARKS

Applicant respectfully requests reconsideration and allowance of the subject application. Claims 1-56 are pending, of which claims 1, 13, 23, 25, 27, 29, 36, 38, 44, 45, 49, and 52 have been amended, as indicated above.

As a preliminary matter, Applicant submitted an Information Disclosure Statement (IDS) on November 30, 2004, and requests consideration and entry of the materials disclosed therein into the official record of the subject application.

Objections to Claims 23 and 24

The Office advises that claim 24 will be objected to under 37 CFR 1.75 as being a substantial duplicate of claim 23 (*Office Action* p.2). Claim 23 is amended for reasons unrelated to this objection which renders the objection moot, and Applicant respectfully requests that the objection be withdrawn.

35 U.S.C. §102 Claim Rejections

Claims 1, 3-21, 36-37, 41-45, 47-48, and 50-56 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,890,017 to Tulkoff et al. (*Office Action* p.2). Applicant respectfully traverses the rejection. Additionally, Applicant notes that paragraph 3 of the Official Action refers to the Gulick reference, while paragraphs 4-39 of the Official Action refer to Tulkoff. It appears that the Office intended to apply Tulkoff to the above rejected claims, and Applicant responds herein accordingly.

1 Claim 1 recites “dynamically defining a plurality of logical buses in
2 response to a need associated with receiving the streams of audio wave data, the
3 logical buses each corresponding to an audio wave data consumer”. The
4 amendments to claim 1 are supported by at least page 14, lines 1-10 of Applicant’s
5 Specification.

6 Although Fig. 1 of Tulkoff and the related description may disclose some
7 type of communications channel between clients (10) and an audio mixer (12),
8 Tulkoff does not support a §102 rejection of the above feature because Tulkoff
9 does not disclose dynamically defining logical buses based on needs associated
10 with receiving the streams of audio wave data. Claim 1 also recites dynamically
11 deallocating a logical bus when no longer needed to route a stream of audio wave
12 data, a feature also supported by the same section of Applicant’s specification as
13 cited above. Tulkoff also does not disclose this feature.

14 Claim 1 also recites “assigning at least one of the multiple streams of audio
15 wave data to a plurality of the logical buses”. These amendments to claim 1 are
16 supported by at least Applicant’s Fig. 3 and the related discussion in the
17 specification on page 12, line 23 through page 13, line 14, which describes the
18 relationship between, e.g., the channel set 302(1) and the two logical buses 306(1)
19 and 306(2). The audio data “fans-out” from the channel set 302(1) and is routed to
20 the two different logical buses 306(1) and 306(2). Fig. 3 also illustrates a similar
21 relationship between channel set 302(3) and logical buses 306(1), 306(2), and
22 306(3).

23 Tulkoff does not disclose or fairly teach this type of audio-data-routing
24 relationship between elements. More particularly, Tulkoff’s various audio
25

1 processes (10) appear to have a “fan-in” relationship with the audio mixer (12) and
2 ultimately with the audio device (14) (*see* Fig. 1, for example). As such, Tulkoff
3 does not show assigning at least one of the multiple streams of audio wave data to
4 a plurality of the logical buses, as recited in claim 1.

5 Accordingly, claim 1 along with dependent claims 3-12 are allowable over
6 Tulkoff for at least the reasons described above and Applicant respectfully
7 requests that the §102 rejection be withdrawn.

8
9 Claim 13 recites “a software component that dynamically defines logical
10 buses in response to a need associated with receiving the streams of audio wave
11 data and that deallocates at least one of the logical buses when no longer needed,
12 the logical buses corresponding respectively to the plurality of audio wave data
13 consumers”.

14 As described above in the response to the rejection of claim 1, Tulkoff does
15 not show or disclose that logical buses are dynamically defined in response to a
16 need associated with receiving streams of audio wave data, or that a logical bus is
17 deallocated when no longer needed, as recited in claim 13. Accordingly, claim 13
18 along with dependent claims 14-21 are allowable over Tulkoff for at least these
19 reasons and the §102 rejection should be withdrawn.

20
21 Claim 36 recites “a plurality of logical bus objects configured to receive
22 audio wave data, wherein each logical bus object corresponds to an audio wave
23 data consumer, wherein each logical bus object is dynamically allocated in
24 response to a need associated with receiving the audio wave data, and wherein at
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1 least one of the logical bus objects can be dynamically deallocated when no longer
2 needed to route a stream of audio wave data”.

3 As described above in the response to the rejection of claim 1, Tulkoff does
4 not show or disclose that a logical bus object is dynamically allocated in response
5 to a need associated with receiving audio wave data, or that a logical bus object is
6 dynamically deallocated when no longer needed to route a stream of audio wave
7 data, as recited in claim 36. Accordingly, claim 36 along with dependent claims
8 37 and 41-43 are allowable over Tulkoff for at least these reasons and the §102
9 rejection should be withdrawn.

10
11 Claim 44 recites that at least one stream of audio wave data is routed to a
12 plurality of different logical buses”. As described above in the response to the
13 rejection of claim 1, Tulkoff’s various audio processes (10) appear to have a
14 “fan-in” relationship with the audio mixer (12) and ultimately with the audio
15 device (14) (*see* Tulkoff Fig. 1, for example). As such, Tulkoff does not show that
16 a stream of audio wave data can be routed to plurality of different logical buses
17 (e.g., in a “fan-out” relationship), as recited in claim 44.

18 Accordingly, claim 44 is allowable over Tulkoff for at least these reasons
19 and the §102 rejection should be withdrawn.

20
21 Claim 45 recites “dynamically providing at least one logical bus component
22 in response to a need associated with receiving the streams of audio wave data, the
23 logical buses configured to route the one or more streams of audio wave data to
24 the audio wave data consumer component”, and “dynamically deallocating at least
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1 one of the logical buses when no longer needed to route a stream of audio wave
2 data”.

3 As described above in the response to the rejection of claim 1, Tulkoff does
4 not show or disclose dynamically providing a logical bus component in response
5 to a need associated with receiving streams of audio wave data, or dynamically
6 deallocating a logical bus when no longer needed to route a stream of audio wave
7 data, as recited in claim 45. Accordingly, claim 45 along with dependent claims
8 47-48 and 50-51 are allowable over Tulkoff for at least these reasons and the §102
9 rejection should be withdrawn.

10
11 Claim 52 recites “dynamically defining logical buses in response to a need
12 associated with receiving the streams of audio wave data, the logical buses each
13 corresponding to an audio wave data consumer”, “assigning at least one of the
14 multiple streams of audio wave data to a plurality of the logical buses”, and
15 “dynamically deallocating at least one of the logical buses when no longer
16 needed”.

17 As described above in the response to the rejection of claim 1, Tulkoff does
18 not show or disclose any of these features recited in claim 52. Accordingly,
19 claim 52 along with dependent claims 53-56 are allowable over Tulkoff for at least
20 these reasons and the §102 rejection should be withdrawn.

1 **35 U.S.C. §103 Claim Rejections**

2 Claims 2, 22-30, 32-35, 38, 40, 46, and 49 are rejected under 35 U.S.C.
3 §103(a) as being obvious over Tulkoff in view of U.S. Patent No. 5,717,154, to
4 Gulick (*Office Action* p.14). Applicant respectfully traverses the rejection.

5 Claims 31 and 39 are rejected under 35 U.S.C. §103(a) as being obvious
6 over Tulkoff in view of Gulick, and further in view of U.S. Patent No. 6,100,461
7 to Hewitt (*Office Action* p.21). Applicant respectfully traverses the rejection.

8
9 Claim 2 is allowable by virtue of its dependency upon claim 1 which is
10 allowable over Tulkoff for at least the reasons described above in response to the
11 §102 rejection of claim 1. Claim 2 is also allowable over the Tulkoff-Gulick
12 combination because Gulick does not address the deficiencies of Tulkoff as
13 described above in the response to the rejection of claim 1. Accordingly, the §103
14 rejection should be withdrawn.

15
16 Claims 22-24 are allowable by virtue of their dependency upon claim 13
17 which is allowable over Tulkoff for at least the reasons described above in
18 response to the §102 rejection of claim 13. Claims 22-24 are also allowable over
19 the Tulkoff-Gulick combination because Gulick does not address the deficiencies
20 of Tulkoff as described above in the response to the rejection of claim 13.

21 Additionally, claim 23 recites that “the sources include a plurality of
22 synthesizers that generate the one or more streams of audio wave data, wherein at
23 least one of the synthesizers generates a plurality of outputs, and wherein
24 respective ones of the outputs are provided to different respective logical buses”.

1 Tulkoff and/or Gulick do not teach or suggest a synthesizer that generates a
2 plurality of outputs that are provided to different respective logical buses, as
3 recited in claim 23. As described above in the response to the §102 rejection of
4 claim 1, Tulkoff does not fairly teach a “fan-out” type of audio-data-routing
5 relationship between elements, and Gulick is not cited for this feature.

6 Accordingly, claim 23 is also allowable over the Tulkoff-Gulick
7 combination for at least these reasons and Applicant respectfully requests that the
8 §103 rejection be withdrawn.

9
10 Claim 25 recites an audio generation system comprising “a software
11 component that defines a plurality of logical buses, an individual logical bus
12 configured to correspond to an audio wave data consumer, receive one or more of
13 the streams of audio wave data, and route the one or more streams of audio wave
14 data to the audio wave data consumer”, and “wherein the synthesizer is configured
15 to route at least one of the streams of audio wave data to different ones of the
16 logical buses.”

17 Tulkoff and/or Gulick do not teach or suggest a synthesizer configured to
18 route a stream of audio wave data to different ones of the logical buses, as recited
19 in claim 25. As described above in the response to the §102 rejection of claim 1,
20 Tulkoff does not fairly teach a “fan-out” type of audio-data-routing relationship
21 between elements, and Gulick is not cited for this feature.

22 Accordingly, claim 25 is allowable over the Tulkoff-Gulick combination
23 for at least these reasons and the §103 rejection should be withdrawn.
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1 Claims 26-31 and 32-35 are allowable by virtue of their dependency upon
2 claim 25. Additionally, some or all of claims 26-30 and 32-35 are allowable over
3 the Tulkoff-Gulick combination or Tulkoff-Gulick-Hewitt combination for
4 independent reasons. For example:

5 Claim 27 recites that “the software component is configured to define the
6 logical buses dynamically in response to a need associated with receiving the
7 streams of audio wave data, and is further configured to dynamically deallocate at
8 least one of the logical buses when no longer needed”.

9 As described above in the §102 response to the rejection of claim 1, Tulkoff
10 does not show a software component to define logical buses dynamically in
11 response to a need associated with receiving streams of audio wave data, or that
12 the software component can dynamically deallocate at least one of the logical
13 buses when no longer needed, as recited in claim 27. Further, Gulick is not cited
14 for this feature. Accordingly, claim 27 is allowable over the Tulkoff-Gulick
15 combination for at least these reasons and the §103 rejection should be withdrawn.

16 Claim 28 recites that “the synthesizer has a channel that generates a stream
17 of audio wave data and that is configurable to route the stream of audio wave data
18 to a plurality of the logical buses”. Tulkoff and/or Gulick do not teach or suggest
19 that a synthesizer has a channel that is configurable to route a stream of audio
20 wave data to a plurality of the logical buses, as recited in claim 28. As described
21 above in the response to the §102 rejection of claim 1, Tulkoff does not fairly
22 teach a “fan-out” type of audio-data-routing relationship between elements, and
23 Gulick is not cited for this feature. Accordingly, claim 28 is allowable over the
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1 Tulkoff-Gulick combination for at least these reasons and the §103 rejection
2 should be withdrawn.

3
4 Claims 38 and 40 are allowable by virtue of their dependency upon
5 claim 36 which is allowable over Tulkoff for at least the reasons described above
6 in response to the §102 rejection of claim 36. Claims 38 and 40 are also allowable
7 over the Tulkoff-Gulick combination because Gulick does not address the
8 deficiencies of Tulkoff as described above in the response to the rejection of
9 claim 36.

10 Additionally, claim 38 recites that “at least one of the streams of audio
11 wave data is provided to different respective logical buses”. As described above
12 in the response to the rejection of claims 25 and 28, Tulkoff and/or Gulick do not
13 teach or suggest that a stream of audio wave data is provided to different
14 respective logical buses, as recited in claim 38. Accordingly, claim 38 is also
15 allowable over the Tulkoff-Gulick combination for at least these reasons and the
16 §103 rejection should be withdrawn.

17
18 Claim 39 is allowable by virtue of its dependency upon claim 36 which is
19 allowable over Tulkoff for at least the reasons described above in response to the
20 §102 rejection of claim 36. Claim 39 is also allowable over the
21 Tulkoff-Gulick-Hewitt combination because neither Gulick nor Hewitt addresses
22 the deficiencies of Tulkoff as described above in the response to the rejection of
23 claim 36.
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1 Claims 46 and 49 are allowable by virtue of their dependency upon
2 claim 45 which is allowable over Tulkoff for at least the reasons described above
3 in response to the §102 rejection of claim 45. Claims 46 and 49 are also allowable
4 over the Tulkoff-Gulick combination because Gulick does not address the
5 deficiencies of Tulkoff as described above in the response to the rejection of
6 claim 45.

7
8 **Conclusion**

9 Pending claims 1-56 are in condition for allowance. Applicant respectfully
10 requests reconsideration and issuance of the subject application. If any issues
11 remain that preclude issuance of this application, the Examiner is urged to contact
12 the undersigned attorney before issuing a subsequent Action.

13
14 Respectfully Submitted,

15
16 Dated: March 24, 2005

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